

WHAT IS CLAIMED IS:

1. A back light module, comprising:
  - a frame;
  - at least a U-shaped lamp tube positioned inside the frame, wherein the U-shaped lamp tube has two electrodes that faces the bottom section of the frame just underneath the U-shaped lamp tube; and
  - a diffusion plate positioned inside the frame above the U-shaped lamp tube.
2. The back light module of claim 1, wherein the module furthermore comprises a reflecting plate set on the bottom section of the frame.
- 10 3. The back light module of claim 1, wherein the module furthermore comprises a plurality of optical plates positioned over the diffusion plate.
4. A back light module, comprising:
  - a frame;
  - at least a lamp tube module positioned inside the frame, wherein each lamp tube module comprises at least two U-shaped lamp tubes; and
  - a diffusion plate positioned inside the frame above said lamp tubes.
- 15 5. The back light module of claim 4, wherein the electrodes of the U-shaped lamp tube inside each lamp tube module face the bottom section of the frame just underneath the lamp tubes.
- 20 6. The back light module of claim 4, wherein the electrodes of the U-shaped lamp tube inside each lamp tube module face one of the side edges of the frame.
7. The back light module of claim 4, wherein the U-shaped lamp tubes within each lamp tube module is symmetrically positioned inside the frame.

8. The back light module of claim 4, wherein the U-shaped lamp tubes within each lamp tube module is alternately positioned inside the frame.

9. The back light module of claim 4, wherein the lamp tube modules form an array inside the frame.

5 10. The back light module of claim 4, wherein the lamp tube modules are laid down in rows or columns inside the frame.

11. The back light module of claim 4, wherein the module furthermore comprises a reflecting plate positioned on the bottom section of the frame.

10 12. The back light module of claim 4, wherein the module furthermore comprises a plurality of optical plates positioned on the diffusion plate.